

An Essay
on
Bronchitis

Respectfully

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by

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Bronchitis.

Inflammation is interesting to the physician as well as the surgeon. While to the one it covinces vitality of the system, to the other there is presented an idiopathic variation from its normal character. Probably no abnormal state has been ~~so~~ prolific of so much discussion and investigation. But while opinions may vary as to the cause and its results, all are agreed that a

correct practical view is absolutely necessary for the successful prosecution of the healing art.

A great majority of all the diseases to which the human frame is liable begin with inflammation, or end in inflammation, or are accompanied by inflammation, or resemble inflammation in their symptoms. It is interesting not only in its morbid phenomena, but also in its healing tendencies. However, it is not our purpose to speak of this interesting subject; for after all that has been said in the case, Celsus ages ago defined it, when he said "*Notae inflammationis sunt quatuor, - rubor et tumor cum dolore et calore.*"

As physicians we have to do with its direct symptoms, by which I mean those cognizable to the sense of sight, hearing or of touch, and what has been termed its constitutional symptoms such as the heat, chill, thirst and excitability of a fever. The circumstances under which it may exist should be kept in mind.

Especially during the consideration of our subject it should not be forgotten that it runs higher in children, plethoric persons, and in those of sanguine temperament, than in those of the opposite conditions. It is also modified according as it affects the different tissues.

There is no portion of the human organism which may not suffer from inflammation. Externally and internally does it oppose itself to the discernment and remedies of the healing art.

We may have the external tegumentary covering of the body inflamed, and again the delicate membranes of the bronchia and lungs become the seat of this abnormal state.

We find however that the internal surfaces which communicate with the air are clothed with a mucous membrane; a fact which is particularly interesting to the physician. He knows that mucous surfaces are not disposed to adhere inflammation. If they

now, the slightest existing causes might be productive of results, which being without the pale of remedial agencies, would result in death.

Although the internal tegumentary membranes are protected from adhesive inflammation and its results, we have to meet and cope with forms of disease which require the greatest professional acquirements, the strictest scrutiny and the most acute discernment.

In order that we may with profit enter upon the more immediate consideration of the subject of this Thesis "Bronchitis," we must first notice the anatomical structure of the bronchi, and their relations to adjoining organs.

Each lung is retained in its place by its root, which is formed mainly by the pulmonary artery, veins, and bronchial tubes. The bronchi proceed from the bifurcation of the trachea to their corresponding lungs. Indeed they may be considered as two terminations of the trachea, being essentially of the same structure and arrangement. The right bronchus is shorter and of a larger diameter than the left. Having entered the lungs they divide into two branches, and these divide and subdivide dichotomously to their ultimate termination in the intercellular passages and air cells. They have their own arteries and veins.

The fibrous coat of the bronchial tubes is possessed of a considerable degree of contractility. This is soon exhausted by the action of stimulus. The peculiar power of Bell and Strain in diminishing this contractility — affords a good reason homoeopathically, why these remedies act so well in spasmodic asthma.

It has been suggested that the contractility of the smaller bronchi may serve to expell collections of mucus which may have accumulated in them, and which neither ciliary action or the ordinary expiratory efforts suffice to displace.

Considering then the important part and office which the bronchi take in the function of respiration,

we are not all surprised to find
them the seat of serious diseases.

It is now generally allowed that the
lungs cannot be seriously affected
without the bronchial ramifications
being disturbed, though the bronchial
tubes may be in certain states of in-
flammation without impairing the
normal state of the lungs. The bronchial
tubes become the seat of inflammation,
and ~~that~~ this inflammation begins
with the mucous lining.

Having considered the bronchi in their
natural anatomical condition, we will
now investigate them when in a
state of inflammation, or in other
words we will consider the

Pathology of Bronchitis.

A knowledge of this important aspect of our subject enables us to diagnose correctly, and thereby attack the enemy at the most available points; and so to prognosticate that in many cases he may cheer his patient, and relieve the anxious care which loving friends manifest in the sufferer's behalf. It can safely be said, that the absence of all excitement & exciting causes in the sick chamber is absolutely requisite either for the patient's good or the physician's name. And this alone, if there were no other reasons, is sufficient to demonstrate the importance of physiology either in the study of the system in a normal

or diseased state, which latter has been otherwise called pathology.

In treating of the pathology of this disease, it will be better to mention the symptoms which shall seem to grow out of the abnormal condition there under consideration.

We find all ages subject to this disease. It may be congenital. It is most prevalent in the sea shore towns of N.E., although as it is a higher grade of cataract it is found to occupy a more or less prominent place among the diseases incident to particular localities. There is however danger of confusing this with other troubles of the respiratory and vocal apparatus. It may be either acute

or chronic. The acute form is more common among children, while in the adult the chronic form oftener presents itself. Yet the acute and chronic forms are not separated by a well defined line.

We often meet the acute form mild and without fever. Here the affection seems to depend upon some alteration of the lining membrane of the nares and throat. Such a case scarcely interferes with the healthy functions. The secretion promptly takes place, and it may be considered to the respiratory apparatus what an approxial diarrhoea is to the digestive system.

The temperament of the individual exerts its influence in a marked degree. In the hysterical female, we may have a slight

catarrh producing an obstinate and painful cough. As to the cough some patients are troubled but little, while others are harassed by continual paroxysms. A tickling sensation is perceived in the trachea which usually precedes and follows the cough. We discover this when the patient lies down, or in the morning when he is in an erect position. This will cease after an expectoration. This is a nervous symptom. For whenever on the external skin this may occur, physiology tells us that it is owing to the large amount of sensory nervous fibres which are distributed in its substance. The cough may be owing to the secretion passing over the part of the trachea where the tickling

sensation is felt, the flow being favored by the recumbant position; again to the extreme elongation of the vula, or the existence of suppurating cavities which communicate freely with the bronchus. Position has no effect in relieving the patient, if the cough is owing to the elongation of the vula, while if to the presence of suppurating cavities, it is worse when he lies upon the healthy side.

There is rarely any change in the countenance in this form. Then we may have all these symptoms worse, with a high fever, the face livid, owing to the imperfect arterialization of the blood. The duration of the first stage is extremely variable. At the second stage the inflammatory fever passes

into the hectic type. By which I mean
a fever the consequence of irritation and
excitement; so much so. that it may
be said to exist as a habit of the
body. There is perspiration with a sour
smell, The cough continues more
frequent though less painful, and
is followed by a copious expectoration
of muco purulent matter; the breathing
though more hurried is less laborious
than in the first stage.

There can be no doubt that many
recoveries which have been considered
as so many cures of Phthisis Pulmonalis
have been only cures of this type of
Bronchitis.

This form may terminate in chronic
Bronchitis; may cause death by a
sudden obstruction of a large tube;

may be accompanied by a rapid or followed by a slow development of tubercles; it may pass into pneumonia, or terminate by hydrothorax or end in death.

The mucous lining of the air passages cannot be inflamed without the liquid which it secretes. Presenting modifications some of which regard its quantity, & thus its quality. The normal secretion from the mucous membrane is called mucus. This a fluid of peculiar viscidty, either colourless or yellow, slightly transparent or nearly so; incapable of mixing with water, and sinking in it except when buoyed up by bubbles of air entangled in its mass, which is commonly the case with the bronchial and nasal mucus.

Its chief constituent has been termed Mucin. We are now prepared to consider the character and modifications of the bronchial secretion in Bronchitis.

At the commencement of the disease the cough is dry. So long as we have this dry cough the disease may be said to be in its beginning. There occurs the serous secretion which is thin and transparent. After a certain period each fit of coughing is followed by the expectoration of a clear, transparent mucus like the white of an egg. This is termed the transparent mucous secretion. It also assumes aropy appearance, its tenacity and viscidty being greater according to the degree of irritation under which the mucous membrane may

be existing. In some respects This resembles the jelly like sputa of pneumonia.

Upon the surface of This mucus there is usually more or less froth. If the patient does not expectorate till after a long fit of coughing there may be bubbles of air. Sometimes during this stage the sputa are mixed with blood. As long as the sputa present the appearance which we have noticed, the symptoms of bronchial irritation do not improve; The expectorated matter being in a state of cruidity according to the ancient mode of expression. With such an expectoration the inflammation is intense, and the fever & dyspnea indicate a serious aspect of affairs.

But according as the inflammation proceeds to resolution, the sputa change

their character. The mucus gradually loses its transparency; it is mixed with opaque, yellow, white or greenish masses, which though scanty at first, increase more and more untill they constitute the whole of the sputa. This indicates a marked remission in all the symptoms, and we may hope ceteris paribus for a speedy termination in complete resolution. This opaque, mucous or albuminous secretion is subject to great variety. It may go back to its former transparent,ropy, frothy and glaring character. When this occurs the attending physician must expect an aggravation of the disease. Still persons have been known to recover when the sputa remained in the state of cruddity.

We may have the secreted matter moulded to the form of the bronchial tubes, and

acquire a certain degree of consistence. Patients have been known to expel these bronchial casts after violent fits of coughing. Why we have this apparent deviation from the normal character of the mucous secretion, viz, a plastic exudation, we do not know. The exudation is called plastic. That which occurs in our disease is not much different from the membrane of *Cynanche Tonsillaris*. We have said it is called plastic. But this can hardly obtain, if we consider the real force of the word. It never becomes organized, never connects itself by blood vessels with the surface from which it proceeds. It may be thus explained. The inflammation involves the sub mucous areolar tissue; the natural product of this phlegmous inflammation transudes readily through the thin, simple and delicate mucous

membrane. This much however is certain that where the white fibrous tissues are predominant, we have pretty clearly indicated a lymphatic condition of the lung, and hence the liability to formative inflammations is more developed.

In addition to the transparent, serous and opaque we may have the muco puriform and puriform secretions. We meet with the muco puriform chiefly in the second stage of acute Bronchitis, and in conjunction with it we have the muco crepitating rale. In order that the change from the mucous to the muco-puriform may be considered favorable, certain attending circumstances are requisite. The expectoration becomes easier, the pulse softer and slower, breathing easier, the fever diminishing, the muco-crepitating

rale becomes larger, and the sound on percussion clear even in the posterior inferior portions of the lung. But we may have the reverse of this with a mucous-puriform expectoration. The real purulent expectoration is rare. We have the mucous-puriform far more often than the puriform.

Physical Signs.

Percussion and Auscultation.

Percussion is clear, through the chest, except where there is great congestion.

Auscultation.

If the disease is seated in the smaller tubes we have the sibilant rhoncus, if in the larger tubes the sonorous rhoncus, and we have the mucous

rhoncus as the disease advances and expectoration commences. During the dry stage we have the hissing sound which has been termed sibilus. Generally you may suspend the rhoncus by getting the patient to make a hearty cough. We may have rhoncus and sibilus together. If we have sibilus all over the chest, we are to consider the case as a severe one, and attended with danger. These sounds are heard during breathing, and have no relation to the voice or cough. When we have the bubbles in the transparent sputa we have a new sound caused by the passage of the air through the fluid which is termed, crepitation. This sign is divided into the larger and smaller crepitation.

Upon a post mortem examination of bodies of those who have died of any disease whatever, during which they were affected with a mild and recent Bronchitis, there is found some redness in a circumscribed portion of the mucous membrane, particularly at the termination of the trachea, and in the first divisions of the bronchi. The increase of the redness will be according to the severity of the inflammation. And yet in some cases of bronchitis accompanied with the puriform expectoration, the inner membrane of the air passages has been found scarcely rose, or even perfectly white throughout its whole extent.

Inflammatory softening of the bronchial mucous membrane is much more rare than that of the gastro intestinal mucous

membrane. It is very rare to find this membrane ulcerated. Acute Bronchitis commonly destroys life without any perceptible ulceration of the surface. The great majority of bronchial ulcerations are the result of chronic disease. The frequency of ulcerations of the air passages decreases from above downwards.

Again we may have a thickening of the mucous membrane either under acute or chronic inflammation. This may occur either throughout its whole extent, or only at certain points. Such thickening be it ever so inconsiderable may be attended by important results. There may be diminution in the size of the cavities through which the air is to pass to enter from the trachea into the pulmonary vesicles.

This gives origin to the bronchial cæle, and its two varieties cæle-sibilant and cæle-constant. Then we may have the opposite condition obtaining, namely the dilatation of the bronchi. We may have dilatation of one or more of the bronchi through their entire extent of a greater or less increase of capacity. This more common in the branches of the bronchi, than in the bronchi themselves.

Again we may have an enlargement of one of the bronchi at a particular point. Lastly we may have a continued series of narrowings and dilatations in the same bronchial tube. These dilatations give rise to pectorilogy and a characteristic souffle.

Dilatation may be owing to hypertrophy or atrophy of the tissues or be the

result of merely mechanical causes. In the two first instances probably the vital force of the part is suspended or abnormally increased. Dilatation may be considered as a disease by itself, as we have the same affection in other structures; but it may best be understood and treated as it commonly occurs in connection with the disease of the neighboring organs.

We have thus touched on the morbid anatomy of the bronchi under the influence of that diseased state known as Bronchitis. More could be said. But after all, it is with the general symptoms we have to deal when called to the sufferer. So that knowing all the rest, if we shall be ignorant of the remedies and means with which we may be able to effect a cure, we shall bring

contempt upon our profession, and disgrace upon ourselves.

Hence we shall conclude this paper by some remarks on the treatment of Bronchitis, more particularly as regards its acute form.

Treatment.

A distinguished allopathic writer has declared the treatment of Bronchitis to be a matter of some nicety. He says the patient's distress arises from the inability to supply air enough to arterialize the venous blood which is transmitted to the lungs; and by diminishing "the quantity of blood sent to those organs you will, *in toto*, mitigate his uneasiness." Sixteen ounces is mentioned as a moderate bleeding. He adds nothing as to the convalescence of his

patient. It is further added for our information that where we have sibilus we are to take blood by local means. The quantity is to depend upon the keenness of the sibilus! The treatment which follows is heroic. The bowels are to be cleared out by a mercurial purgative. By this time the meek patient is reduced to a humble and willing condition for some more active, and still mild treatment. Tart Emetic is given until nausea is produced. Depression follows, but they tell us it is only temporary; would it not be well for our allopathic brethren to ask, may not such depression, even in a single case, sometimes be lasting. Stimulants and expectorants are now ordered. Opium is administered to bring on sleep.

And sleep follows. such sleep! By way of advice, we are bidden not to administer Opium in a full poisoning dose, "for then you may have very unpleasant symptoms."

Such is the usual allopathic and common treatment in this country. Prof Jackson of Harvard Medical College tells his pupils never to reduce their patient so low, that ^{they} may not have the means to resuscitate him. Another, one of his colleagues, in a clinic, remarked this patient would have recovered had she possessed the vital force requisite to withstand the active treatment which was needful; viz cauterization with hot irons and a thorough mercurial course.

But a brighter day is dawning. Gradually are old prejudices and antique practices yielding to scientific truth and present successful experience. Perhaps there is no single instance in which the merits of Homoeopathy and Allopathy can be more favorably compared than in Bronchitis. The homoeopathic physician does not commence by depleting the system of that which Heaven has declared to be the "life of man," but calmly investigates the symptoms, gets the history of the disease; treats not according to rule, for there is no rule which will apply to the particular case, as there never occurred just such a particular identical disease in its present manifestation before.

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If there is found a hot skin, unusually
dry, a strong and rapid pulse, obstructed
breathing with restlessness and anxiety;
Aconite is administered in the looser
dilutions. Rest of body and mind
must be enjoined. The patient must
not talk or whisper. Whispering is
worse than loud talking. Particular
attention must be paid to the tem-
perature of the room. The heat should
be from 67° to 80° Fahr.

We mentioned aconite to be used
at the commencement. Perhaps the
majority of cases would rather indi-
cate Sulphur. We have the dry cough,
fatigue, pains and cloudiness of the
head, with accumulation of mucus
in the bronchia.

If there is excessive hoarseness and
 loose cough, produced by a titillation
 in the pit of the stomach, with a
 whitish or yellow expectoration and
 apprehensiveness as to death. Phos. Acid.

A very distressing cough with redness
 of the face and vomiting of mucus,
 &c. &c. When there is an expectoration
 of bitter, yellowish, or whitish matter
 or of sanguilient mucus. Puls.

When there is a cough with expectora-
 tion of much mucus, which is
 yellow or puriform, with weakness
 particularly across the chest, Sepia
 would be indicated.

Nux Vomica is indicated by pain
 in the bronchia, accumulation of
 mucus, with the head symptoms
 which are peculiar to this drug.

Rhus Tox. where there is obstructed breathing
and great accumulation of mucus.

Arsen. where there is great lassitude
and prostration with tenacious mu-
cus, blood streaked, the expectoration
difficult, with spasms of the pecto-
ral muscles during an inspiration.

Ipecac. where there is anxious and
hurried breathing, rattling noise
in the bronchial tubes.

Scillal may do good service.

Ignatia. Yellow expectoration, sense of
suffocation as from the fumes of
sulphur, especially where these symptoms
occur in patients who have recently
been the subjects of grief.

Bell. Hep. Spoug. Iodine, Kali Hyd.
Tart Emetic may all do good
service according to their indications.

The prognosis in a great majority of cases is favorable.

In conclusion there is no class of diseases which presents so many points of interest to the intelligent physician as those of the respiratory organs. As the disease is the more difficult in its character, so is the cause of Homoeopathic medicine the more advanced by the intelligent and well directed efforts of its followers in effecting a permanent cure.

All that is necessary to accomplish this happy result and thus do honor to those who have instructed us, will be found in the degree

with which our career shall be marked
by that which the Immortal Hahnemann
has said is demanded of the physician;
an unprejudiced mind, sound under-
standing, attention and fidelity in
observing and tracing the image
of disease.

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Philadelphia
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